Instructor	Zachary T. Ball zb1@rice.edu	BRC 327 office hours: Monday 1:30–3:00 P.M.
Teaching Assistant	Mary "Katie" Miller mkk6@rice.edu	
Course Assistant	Anita Walker aawalker@rice.edu	DBH 243

Topic

Organometallic Chemistry II. An introduction to organometallic chemistry, focusing on transition metal structure, bonding, and reactivity.

This course is the second half of a two-course sequence, together with CHEM 583: Organometallic Chemistry I.

Prerequisites

CHEM 583 or instructor permission. Please see me outside of class if you have concerns about your background.

Course Meetings

Mon., Wed., Fri. 9:00-9:50 AM in BRC 286. Attendance is required and absences will affect the "participation" portion of a student's grade.

Online Resources

Selected course materials will be available online (canvas.rice.edu).

Course materials

This course will use one primary textbook: *Organometallic Chemistry,* 3rd Ed., by Gary Spessard and Gary Miessler. (ISBN-13: 978-0199342679)

Supplementary required readings will provided.

Requirements and Grades

	points
problem sets (3)	200
exam	200
participation	100
TOTAL	500

Exams

There will be one exam. The exam will be open notes. You may bring whatever paper resources (books, notes, old homework, etc.) you wish, but no electronic aids (phone, computer, etc.) may be used.

Exam regrades

You have one week from the time that an exam is handed back to request a regrade for an incorrectly graded exam. If you feel there has been an error in grading you should explain your request on a separate piece of paper and staple this to your original and unaltered exam and submit them to the course instructor. *Only exams written in non-erasable ink may be submitted for regrade. Exams with any markings, erasures, or other alterations of any kind added after initial grading may not be submitted for a regrade.*

Problem Sets

Problem sets are understood to be your own work. You may consult with others, including classmates, about the question. You may use online resources. But you should formulate and write down your answers independently.

Course Outcomes

Students completing the course should be able to

1) Identify, explain and rationalize catalytic cycles in terms of their mechanisms in terms of the fundamental steps involved.
2) Use retrosynthetic concepts to design synthetic approaches to target structures using organometallic intermediates.
3) Demonstrate proficiency reading, understanding, and analyzing primary literature in the topics of this course.

Honor Code

The Rice University Honor Code applies to all work conducted in this class. Students may work collaboratively on homework assignments.

Disabilities

If you have a documented disability that will impact your work in this class, please contact the course instructor to discuss your needs. Additionally, you will need to register with the Disability Support Services Office in the Allen Center.

Tentative Schedule			Lecture Topic		Notes	week
Mon	Oct 14	No Class – Midterm Recess				1
Wed	Oct 16	class #1	carbenes	Ch. 10 & Ch. 11	**PS1 out**	
Fri	Oct 18	class #2				
Mon	Oct 21	class #3	polymerization			2
Wed	Oct 23	class #4				
Fri	Oct 25	class #5				
Mon	Oct 28	class #6	cross coupling	Ch. 12	**PS1 in; PS2 out**	3
Wed	Oct 30	class #7				
Fri	Nov 1	class #8				
Mon	Nov 4	class #9	oxidation			4
Wed	Nov 6	class #10				
Fri	Nov 8	class #11			**PS2 in, PS3 out**	
Mon	Nov 11	class #12	CH activation			5
Wed	Nov 13	class #13				
Fri	Nov 15	class #14				
Mon	Nov 18	class #15	Frontiers of catalysis	Ch. 13		6
Wed	Nov 20	class #16			**PS3 in, PS4 out**	
Fri	Nov 22	class #17				
Mon	Nov 25	class #18				7
Wed	Nov 27	class #19				
Fri	Nov 29	No Class – Thanksgiving Recess				
Mon	Nov 25	class #20			**PS4 in**	8
Wed	Nov 27	class #21				
Fri	Nov 29	class #22	**Exam**			